

**EVALUATION REPORT  
COLUMBIA PROJECT**

**PREPARED FOR**

***PALMETTO OF RICHLAND COUNTY, LLC***

***RICHLAND COUNTY  
SOUTH CAROLINA***

**JANUARY 9, 2013**

**JWA File No.: 120706**

**FINAL REPORT**



**Joel E. Wood & Associates, L.L.C.**

**Planning • Engineering • Management**

**P.O. Box 296  
Clover, South Carolina 29710  
2160 Filbert Highway  
York, South Carolina 29745  
Tel. (803) 684-3390 • Fax. (803) 628-2891  
EMAIL: joelwood@comporium.net**

SECTION	TITLE
	COVER LETTER AND SIGNATURE
1.0	INTRODUCTION
1.1	GENERAL
1.2	PURPOSE AND SCOPE
2.0	DESCRIPTION OF WASTEWATER FACILITIES
3.0	VALUATION METHODS
4.0	REPRODUCTION COST LESS DEPRECIATION
4.1	SUMMARY
4.2	SEWERAGE COLLECTION AND TRANSMISSION LINES NEW LESS DEPRECIATION
4.3	LIFT STATIONS NEW LESS DEPRECIATION
5.0	EXECUTIVE SUMMARY
5.1	SUMMARY



BOEHRINGER PHARMACEUTICALS, INC. v. MARCH SEPT 2012 SC308704 DISCR @ 2009 228-55-Page 44 of 46

## SECTION ONE INTRODUCTION



VALUATION REPORT  
PALMETTO UTILITIES

COLUMBIA PROJECT  
NOVEMBER 12, 2012



2.4 Following collection of the wastewater by the gravity and transmission mains, the wastewater flows directly to the treatment facility or to lift stations. Flows into the lift stations are pumped to transmission lines that flow by gravity to the treatment facility or by force main directly to the treatment facility. There are a total of twelve (12) lift stations in the Study Area at the time of this report. Information on the lift stations was provided by Palmetto Utilities and JEWA did not make any field visits to determine the condition of the lift stations. A list of the lift stations can be found in the Appendix of this report. The lift stations are duplex stations which range in size from seven and one-half horsepower to seventy-five horsepower. It is estimated that the average age of the lift stations is nine years with an average service life of twenty years for the pumps and rails. All of the lift stations are located within easements or on property controlled by the City of Columbia. The lift stations can be accessed by service vehicles and for the purpose of this Report are assumed to be in good condition. All lift stations do not have an on site emergency generator to supply power in the event of a power outage. It is assumed that portable generators are available to provide emergency power but it is recommended that a generator be provided at each lift station site.

2.5 When collected wastewater enters the lift station, it is then pumped and transferred to other transmission lines or travels directly to the wastewater treatment facility via a system of force mains. The force main system is comprised of approximately 20,800 linear feet of force main ranging in size from 2 1/2" diameter to 12" diameter. The force main is constructed of PVC or ductile iron and the force main has an average age of approximately twelve years with the maximum expected life being one hundred years.



VALUATION REPORT  
PALMETTO UTILITIES

COLUMBIA PROJECT  
NOVEMBER 12, 2012

### 3.0 VALUATION METHODS

#### 3.1 GENERAL

The objective of this analysis is to establish an opinion of the “fair market value” of the wastewater collection system within the Study Area. Fair market value assumes that both the buyer and the seller are aware of all relevant information and that neither party is under the compulsion to act. There are three approaches utilized to provide a basis for an opinion of value of an existing utility system.

The three approaches are:

- (i) the reproduction cost new less depreciation approach;
- (ii) the income approach; and
- (iii) the comparable sales approach.

These approaches analyze various aspects of the system, including the physical conditions of the existing system; the cash flows anticipated to be generated by the utility in the future; and finally, the transaction factors related to the acquisition of similar utilities in the past. Even though none of these methods may be considered ideal on a stand-alone basis since each evaluates a particular facet of the utility, the consideration of all three provides a range for determining the value of the utility system based on numerous relevant factors. The remainder of this section provides a general description of the valuation approaches utilized for the Report.

#### 3.2 REPRODUCTION COST NEW LESS DEPRECIATION APPROACH

The reproduction cost new less depreciation (RCNLD) approach is commonly utilized in the determination of estimated value in utilities and has been accepted in litigation cases involving the acquisition of utilities throughout the United States. The primary reason for this is the fact that most utilities are comprised of complex treatment, pumping and piping networks which all have various service lives and different years of installation. In order to address these technically complex facilities, the RCNLD approach has been developed.

The RCNLD approach determines a cost for each part of the system as it would be necessary to reproduce it at a specific point in time. In many cases, due to the circumstances of historical needs and decisions, the parts used for the present function would not normally be installed today. Therefore, the RCNLD approach includes facilities, systems, configuration, sizing and equipment which are either 1) more than needed and may be underutilized; 2) only partially functional; 3) less than needed; or 4) are not reflective of a typical system of the present capacity. The RCNLD approach estimates values for the system components with unit pricing at the date of valuation as a single construction project. The general concept of this approach contemplates that the property would be constructed as a



### 3.2.1 Depreciation Analysis

Depreciation is defined basically as the loss of value on property from any cause. The usual causes include normal wear and tear through use, lack of maintenance, exposure to the elements and obsolescence. These causes and their effects are usually unique to each utility. Accrued depreciation used in the reproduction cost approach is the difference between the reproduction cost of new property and its estimated market value at the time of appraisal.

In this case, the full average service life (ASL) is used for depreciation. The depreciation method addresses how the value of the property is expensed over its life due to normal wear and tear assuming proper maintenance for the assets. The ASL is necessary to determine the time period over which the physical assets will be depreciated. The ASL is defined as the weighted average of the individual lives of a group of similar assets put into service at the same time. In general, the ASL represents the anticipated time period over which the property will provide useful service. Investment needs for the same function were classified separately as system deficiencies. Investment needs for the same function were classified separately as system deficiencies. Regulatory, functional and other external depreciation is reflected in the reconciled opinion of value.

#### 3.2.1.1 Typical Methods of Depreciation

There are three basic methods of determining depreciation:

1. Accelerated depreciation.
2. Straight-line depreciation.
3. Deferred depreciation.

Each method differs in how the rate of depreciation changes throughout the service life. The accelerated method depreciates an asset faster at the beginning of the service life; the straight-line method depreciates an asset evenly across its service life; and the deferred depreciation method depreciates an asset towards the end of its service life.

Accelerated methods for depreciation are generally used for tax purposes and are not generally available to utilities for accounting or rate-making purposes. The deferred depreciation method provides for depreciation rates slower than straight-line depreciation and has been used by a few regulatory agencies.

$$\begin{aligned} \text{Depreciation \%} &= X/L \\ V_p &= B(1 - X/L) \text{ or} \\ V_p &= V_s = B(0.05) \text{ whichever is greater} \end{aligned}$$

- The data obtained from these sources and others are then compiled to determine the best estimate of the current cost to replace the existing facilities.

In an effort to formulate an opinion of value for the system, this Report will consider the reproduction cost less depreciation valuation approach. The resulting opinion of value is based upon the foregoing findings as well as professional experience.

No.	Description	ASL (years)
<b>WASTEWATER:</b>		
	<b>Wastewater Services</b>	
1	VC	75
2	PVC	100
	<b>Gravity Collection</b>	
3	VC	75
4	PVC	100
5	Ductile Iron	100
6	Manholes	50
	<b>Lift Stations</b>	
7	Pumps-Controls, Rails and Covers	20
8	Structure	50
	<b>Wastewater Transmission Mains</b>	
9	PVC	100
10	DI	80

**SECTION FOUR**  
**REPRODUCTION COST LESS DEPRECIATION**

BOEHRER ENGINEERING, INC. 10/13/2012 10:13:46 AM 12033308004 DISCLOSE 2009-228-55-Page 16 of 46



**COLUMBIA PROJECT  
REPLACEMENT COST LESS DEPRECIATION  
COST SUMMARY**

	<u>REPRODUCTION COST</u>	<u>COST LESS DEPRECIATION</u>
GRAVITY SEWER	\$44,156,202.00	\$38,538,209.00
FORCE MAIN	<u>\$ 460,574.00</u>	<u>\$ 405,305.00</u>
SUB-TOTAL	\$44,616,776.00	\$38,943,514.00
LIFT STATIONS		
	<u>REPRODUCTION COST</u>	<u>COST LESS DEPRECIATION</u>
LIFT STATIONS	\$ 2,874,800.00	\$ 1,581,140.00
TOTAL	\$47,491,576.00	\$40,524,654.00

VALUATION REPORT  
PALMETTO UTILITIES

## 5.1 SUMMARY:

- |                                   |                        |
|-----------------------------------|------------------------|
| Collection and Transmission Lines | \$44,616,776.00        |
| Lift Stations                     | <u>\$ 2,874,800.00</u> |
| TOTAL                             | \$47,491,576.00        |

- |                                   |                               |
|-----------------------------------|-------------------------------|
| Collection and Transmission Lines | \$38,943,514.00               |
| Lift Stations                     | \$ 1,581,654.00               |
| <b>TOTAL</b>                      | <b><u>\$40,524,654.00</u></b> |

- COLUMBIA PROJECT  
NOVEMBER 12, 2012

Wastewater Collection System. We are of the opinion that there should be no adjustment to the Reproduction Cost New Less Depreciation as presented in this Report for system deficiencies other than those accounted for in deductions for "Depreciation" as shown in the calculations of Reproduction Cost New Less Depreciation shown in Section 4.2, 4.3 and 4.4 of this Report.

- J. For this Report, the moveable fixtures, equipment, rolling stock, and inventory associated with the Study Area were not evaluated. The final value placed on the infrastructure within the Study Area should include an audited value of the fixtures, equipment, rolling stock, and inventory associated with the operation and maintenance of the infrastructure within the Study Area.
- K. Elements of the "Going Concern" value of a business should include, but is not limited to, the establishment of customers, growth potential of the area served by the utility, and the efficiency of the work force. A "Going Concern" adjustment was not added to the "Reproduction Cost New Less Depreciation" as defined by this report. "Going Concern" values typically range between five (5%) and ten (10%) of the reproduction cost new less depreciation of a utility system.

## APPENDIX

**A. GRAVITY SEWER LINE AND FORCE MAIN  
REPRODUCTION COST**

Wood Exhibit A  
Page 23 of 46  
1 OF 19

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
233-10	BRANDON HALL					
		8" PVC GRAVITY SEWER	1,000	L.F.	\$30.00	\$30,000.00
		8" DIP GRAVITY SEWER	302	L.F.	\$39.00	\$11,778.00
		MANHOLES	2	EA.	\$2,783.00	\$5,566.00
290-10	BRICKSIDE VILLAGE					
		8" PVC GRAVITY SEWER	1,743	L.F.	\$30.00	\$52,290.00
		MANHOLES	10	EA.	\$2,783.00	\$27,830.00
195-16	BRICKYARD VILLAGE					
		8" PVC GRAVITY SEWER	2,647	L.F.	\$30.00	\$79,410.00
		8" DIP GRAVITY SEWER	923	L.F.	\$39.00	\$35,997.00
		MANHOLES	16	EA.	\$2,783.00	\$44,528.00
157-14	BROOKFIELD					
		8" PVC GRAVITY SEWER	4,128	L.F.	\$30.00	\$123,840.00
		MANHOLES	23	EA.	\$2,783.00	\$64,009.00
276-02	BROOKHAVEN					
276-02A		4" PVC FORCE MAIN	130	L. F.	\$8.00	\$1,040.00
276-02B		6" PVC FORCE MAIN	334	L. F.	\$10.00	\$3,340.00
276-02C		8" PVC GRAVITY SEWER	31,702	L. F.	\$30.00	\$951,060.00
276-07D		8" DIP GRAVITY SEWER	2,188	L. F.	\$39.00	\$85,332.00
276-07F		10" PVC GRAVITY SEWER	103	L. F.	\$32.00	\$3,296.00
276-02G		12" PVC GRAVITY SEWER	2,405	L. F.	\$35.00	\$84,175.00
276-02H		12" DIP GRAVITY SEWER	827	L. F.	\$49.00	\$40,523.00
276-02I		MANHOLES	191	EA.	\$2,783.00	\$531,553.00
276-02J						
276-02K						
276-02L						



Wood Exhibit A  
Page 25 of 46  
3 OF 19

**Wood Exhibit A**  
**Page 26 of 46**  
4 OF 19

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
36-278	CLEAR SPRINGS					
36-22A		8" PVC GRAVITY SEWER	7,870	L. F.	\$30.00	\$236,100.00
100-20(R-5)		8"VCP GRAVITY SEWER	650	L. F.	\$32.00	\$20,800.00
		10" PVC GRAVITY SEWER	1,435	L. F.	\$32.00	\$45,920.00
		MANHOLES	54	EA.	\$2,783.00	\$150,282.00
209-1R	CLEMSON ROAD					
228-13		8" PVC GRAVITY SEWER	4,430	L.F.	\$30.00	\$132,900.00
295-16		8" DIP GRAVITY SEWER	45	L.F.	\$39.00	\$1,755.00
266-18B		MANHOLES	34	EA.	\$2,783.00	\$94,622.00
174-03						
179-12E	CLUB COLONY PHASE II					
		8" PVC GRAVITY SEWER	1,614	L. F.	\$30.00	\$48,420.00
		MANHOLES	8	EA.	\$2,783.00	\$22,264.00
215-12	COTTONWOOD					
		8" PVC GRAVITY SEWER	4,133	L. F.	\$30.00	\$123,990.00
		8" DIP GRAVITY SEWER	72	L. F.	\$39.00	\$2,808.00
		MANHOLES	21	EA.	\$2,783.00	\$58,443.00
184-08	COURT LAND					
		8" PVC GRAVITY SEWER	61	L. F.	\$30.00	\$1,830.00
		8" DIP GRAVITY SEWER	54	L. F.	\$39.00	\$2,106.00
		MANHOLES	1	EA.	\$2,783.00	\$2,783.00
60-31	CRANE CREEK INTERCEPTOR					
		15" PVC GRAVITY SEWER	4,722	L. F.	\$42.00	\$198,324.00
		27" PVC GRAVITY SEWER	65,831	L. F.	\$79.00	\$5,200,649.00
		MANHOLES	72	EA.	\$2,783.00	\$200,376.00

## COLUMBIA SYSTEM VALUATION

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
145-16	CRESCENT LAKE SECTION 1 & 2					
145-16F		10" PVC GRAVITY SEWER	995	L. F.	\$32.00	\$31,840.00
		8" PVC GRAVITY SEWER	12,896	L. F.	\$30.00	\$386,880.00
		8" DIP GRAVITY SEWER	211	L. F.	\$39.00	\$8,229.00
		MANHOLES	71	EA.	\$2,783.00	\$197,593.00
192-22	CRICKENTREE CORNERS					
		8" PVC GRAVITY SEWER	775	L. F.	\$30.00	\$23,250.00
		MANHOLES	5	EA.	\$2,783.00	\$13,915.00
236-12	CVS/PHARMACY STORE #2269					
		8" PVC GRAVITY SEWER	301	L.F.	\$30.00	\$9,030.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00
281-22A	DEER CREEK PHASE II					
		8" PVC GRAVITY SEWER	9,316	L. F.	\$30.00	\$279,480.00
		8" DIP GRAVITY SEWER	448	L. F.	\$39.00	\$17,472.00
		MANHOLES	60	EA.	\$2,783.00	\$166,980.00
231-03	DEVON GREEN SUBDIVISON I,II,III					
		8" PVC GRAVITY SEWER	3,780	L. F.	\$30.00	\$113,400.00
		MANHOLES	21	RA.	\$2,783.00	\$58,443.00
199-12	DIAMANT BOART AMERICA					
		8" PVC GRAVITY SEWER	4,192	L. F.	\$30.00	\$125,760.00
		8" DIP GRAVITY SEWER	80	L. F.	\$39.00	\$3,120.00
		MANHOLES	19	RA.	\$2,783.00	\$52,877.00



## COLUMBIA SYSTEM VALUATION

Wood Exhibit A

Page 29 of 46

7 OF 19

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
141-18A	FISHER WOOD PHASE					
141-18		8" PVC GRAVITY SEWER	10,813	L. F.	\$30.00	\$324,390.00
		8" DIP GRAVITY SEWER	72	L. F.	\$39.00	\$2,808.00
		MANHOLES	66	EA.	\$2,783.00	\$183,678.00
276-07A	FORUM 2					
		8" PVC GRAVITY SEWER	351	L. F.	\$30.00	\$10,530.00
		8" DIP GRAVITY SEWER	176	L.F.	\$39.00	\$6,864.00
		MANHOLES	2	EA.	\$2,783.00	\$5,566.00
RC 145-16C	FOX MEADOW PHASE II					
		8" PVC GRAVITY SEWER	4,273	L.F.	\$30.00	\$128,190.00
		MANHOLES	18	EA.	\$2,783.00	\$50,094.00
175-02J	GLENN MEADOWS VILLAGE					
		8" PVC GRAVITY SEWER	4,787	L.F.	\$30.00	\$143,610.00
		MANHOLES	21	EA.	\$2,783.00	\$58,443.00
239-19	GOOD YEAR TIRE					
		8" PVC GRAVITY SEWER	2,994	L. F.	\$30.00	\$89,820.00
		MANHOLES	1	EA.	\$2,783.00	\$2,783.00
136-08	GREEN SPRINGS					
43-208		8" PVC GRAVITY SEWER	7,905	L. F.	\$30.00	\$237,150.00
		MANHOLES	51	EA.	\$2,783.00	\$141,933.00
306-25	GREEN VALLEY					
		8" PVC GRAVITY SEWER	1,237	L. F.	\$30.00	\$37,110.00
		MANHOLES	9	EA.	\$2,783.00	\$25,047.00

141-18A FISHER WOOD PHASE  
 141-18 8" PVC GRAVITY SEWER 10,813 L. F. \$30.00 \$324,390.00  
 8" DIP GRAVITY SEWER 72 L. F. \$39.00 \$2,808.00  
 MANHOLES 66 EA. \$2,783.00 \$183,678.00  
 276-07A FORUM 2  
 8" PVC GRAVITY SEWER 351 L. F. \$30.00 \$10,530.00  
 8" DIP GRAVITY SEWER 176 L.F. \$39.00 \$6,864.00  
 MANHOLES 2 EA. \$2,783.00 \$5,566.00  
 RC 145-16C FOX MEADOW PHASE II  
 8" PVC GRAVITY SEWER 4,273 L.F. \$30.00 \$128,190.00  
 MANHOLES 18 EA. \$2,783.00 \$50,094.00  
 175-02J GLENN MEADOWS VILLAGE  
 8" PVC GRAVITY SEWER 4,787 L.F. \$30.00 \$143,610.00  
 MANHOLES 21 EA. \$2,783.00 \$58,443.00  
 239-19 GOOD YEAR TIRE  
 8" PVC GRAVITY SEWER 2,994 L. F. \$30.00 \$89,820.00  
 MANHOLES 1 EA. \$2,783.00 \$2,783.00  
 136-08 GREEN SPRINGS  
 43-208 8" PVC GRAVITY SEWER 7,905 L. F. \$30.00 \$237,150.00  
 MANHOLES 51 EA. \$2,783.00 \$141,933.00  
 306-25 GREEN VALLEY  
 8" PVC GRAVITY SEWER 1,237 L. F. \$30.00 \$37,110.00  
 MANHOLES 9 EA. \$2,783.00 \$25,047.00

## COLUMBIA SYSTEM VALUATION

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
255-23	HARDSCRABLE ROAD					
		8" PVC GRAVITY SEWER	286	L. F.	\$30.00	\$8,580.00
		MANHOLES	1	EA.	\$2,783.00	\$2,783.00
244-10	HARRINGTON COURT					
		8" PVC GRAVITY SEWER	3,266	L. F.	\$30.00	\$97,980.00
		MANHOLES	15	EA.	\$2,783.00	\$41,745.00
255-12N	HEATHER GREEN					
255-12K		8' PVC GRAVITY SEWER	12,151	L. F.	\$30.00	\$364,530.00
		MANHOLES	65	EA.	\$2,783.00	\$180,895.00
288-02	HERITAGE FOREST PHASE II,III,IV					
		8" PVC GRAVITY SEWER	4,936	L. F.	\$30.00	\$148,080.00
		12" DIP FORCE MAIN	1,110	L. F.	\$36.00	\$39,960.00
		MANHOLES	29	EA.	\$2,783.00	\$80,707.00
278-01	HESTER WOOD & KILLIAN STATION					
		8" PVC GRAVITY SEWER	5,852	L. F.	\$30.00	\$175,560.00
		MANHOLES	39	EA.	\$2,783.00	\$108,537.00
222-03	HIGHLANDS FORCE MAIN RELOCATE					
		12" DIP FORCE MAIN	1,110	L. F.	\$36.00	\$39,960.00
287-06	HOBART					
		8" PVC GRAVITY SEWER	805	L.F.	\$30.00	\$24,150.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00

**Wood Exhibit A**  
**Page 31 of 46**  
9 OF 19

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
208-14C	HOLLY RIDGE PHASE I,II,III					
20814-B		8" PVC GRAVITY SEWER	4,437	L.F.	\$30.00	\$133,110.00
		8" DIP GRAVITY SEWER	54	L.F.	\$39.00	\$2,106.00
		4" PVC FORVE MAIN	425	L.F.	\$8.00	\$3,400.00
		MANHOLES	27	EA.	\$2,783.00	\$75,141.00
280-11	HOMESTEAD					
		8" PVC GRAVITY SEWER	3,480	L. F.	\$30.00	\$104,400.00
		8" DIP GRAVITY SEWER	1,643	L. F.	\$39.00	\$64,077.00
		MANHOLES	30	EA.	\$2,783.00	\$83,490.00
271-18	IVY SQUARE					
		8" PVC GRAVITY SEWER	3,499	L.F.	\$30.00	\$104,970.00
		10" PVC GRAVITY SEWER	490	L.F.	\$32.00	\$15,680.00
		12" PVC GRAVITY SEWER	336	L.F.	\$35.00	\$11,760.00
		18" PVC GRAVITY SEWER	1,678	L.F.	\$51.00	\$85,578.00
		18" DIP GRAVITY	60	L.F.	\$66.00	\$3,960.00
		MANHOLES	29	EA.	\$2,783.00	\$80,707.00
276-18	KILLIAN ROAD					
		8" PVC GRAVITY SEWER	1,920	L. F.	\$30.00	\$57,600.00
		MANHOLES	10	EA.	\$2,783.00	\$27,830.00
270-03	KILLIAN GREEN					
		8" PVC GRAVITY SEWER	6,795	L. F.	\$30.00	\$203,850.00
		MANHOLES	34	EA.	\$2,783.00	\$94,622.00

Wood Exhibit A  
Page 32 of 46  
10 OF 19



**Wood Exhibit A**  
**Page 33 of 46**  
11 OF 19

Wood Exhibit A  
Page 34 of 46  
12 OF 19

Wood Exhibit A  
Page 35 of 46  
13 OF 19

## COLUMBIA SYSTEM VALUATION

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
255-120	RIVERDALE PHASE I					
		8" PVC GRAVITY SEWER	2,928	L.F.	\$30.00	\$87,840.00
		MANHOLES	12	EA.	\$2,783.00	\$33,396.00
300-12	RIVERS STATION					
		8" PVC GRAVITY SEWER	4,749	L.F.	\$30.00	\$142,470.00
		MANHOLES	30	EA.	\$2,783.00	\$83,490.00
60=31A	ROSE CREEK SUBDIVISION					
142-07B		8" PVC GRAVITY SEWER	16,381	L. F.	\$30.00	\$491,430.00
142-07		8" DIP GRAVITY SEWER	449	L. F.	\$39.00	\$17,511.00
213-05		12" DIP GRAVITY SEWER	8,786	L. F.	\$49.00	\$430,514.00
		24"VCP GRAVITY SEWER	7,546	L. F.	\$70.00	\$528,220.00
		MANHOLES	108	EA.	\$2,783.00	\$300,564.00
290-01B	SAMS CROSSING					
290-01B		8" PVC GRAVITY SEWER	2,426	L. F.	\$30.00	\$72,780.00
		MANHOLES	13	EA.	\$2,783.00	\$36,179.00
175-027	SOUTHWOOD PHASE 3 8C 4					
		8" PVC GRAVITY SEWER	4,512	L.F.	\$30.00	\$135,360.00
		MANHOLES	34	EA.	\$2,783.00	\$94,622.00
199-01(R-1)	SPARKLE BERRY LANE					
211-07						
		8" PVC GRAVITY SEWER	1,116	L. F.	\$30.00	\$33,480.00
		8" DIP GRAVITY SEWER	18	L. F.	\$39.00	\$702.00
		MANHOLES	6	EA.	\$2,783.00	\$16,698.00

Wood Exhibit A  
Page 37 of 46  
15 OF 19

**Wood Exhibit A**  
**Page 38 of 46**  
16 OF 19

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
255-12F	VINEYARDS CROSSING PHASE I 8C 2					
		8" PVC GRAVITY SEWER	4,321	L.F.	\$30.00	\$129,630.00
		MANHOLES	16	EA.	\$2,783.00	\$44,528.00
242-23A	WAVERLY PLACE PHASE II					
242-23D		8" PVC GRAVITY SEWER	5,988	L.F.	\$30.00	\$179,640.00
242-23		MANHOLES	36	EA.	\$2,783.00	\$100,188.00
209-19	WELLINGTON SUBDIVISION PHASE 1					
		8"PVC GRAVITY SEWER	6,072	L. F.	\$30.00	\$182,160.00
		MANHOLES	35	EA.	\$2,783.00	\$97,405.00
228-20	WESTWOOD LAKES					
		8" PVC GRAVITY SEWER	2,295	L.F.	\$30.00	\$68,850.00
		MANHOLES	14	EA.	\$2,783.00	\$38,962.00
169-15	WHITEHURST PHASE I, II, IIB					
169-15A		8"PVC GRAVITY SEWER	4,804	L. F.	\$30.00	\$144,120.00
169-15B		8" DIP GRAVITY SEWER	126	L. F.	\$39.00	\$4,914.00
		MANHOLES	22	EA.	\$2,783.00	\$61,226.00
206-15	WILD AZELEA COURT					
		8"PVC GRAVITY SEWER	945	L. F.	\$30.00	\$28,350.00
		MANHOLES	3	EA.	\$2,783.00	\$8,349.00

## COLUMBIA SYSTEM VALUATION

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
193-20E	WILLOW LAKES PHASE VI - A					
193-20F		8" PVC GRAVITY SEWER	11,934	L. F.	\$30.00	\$358,020.00
193-20G		8" DIP GRAVITY	320	L. F.	\$39.00	\$12,480.00
19320H		10" PVC GRAVITY SEWER	1,747	L. F.	\$32.00	\$55,904.00
193-20A		10" DIP GRAVITY SEWER	54	L. F.	\$42.00	\$2,268.00
		12" PVC GRAVITY SEWER	3,395	L. F.	\$35.00	\$118,825.00
		12" DIP GRAVITY SEWER	89	L. F.	\$49.00	\$4,361.00
		MANHOLES	137	EA.	\$2,783.00	\$381,271.00
212-18(R-1)	WINCHESTER SUBDIVISION					
212-18A		8"PVC GRAVITY SEWER	27,030	L. F.	\$30.00	\$810,900.00
212-18		8"DIP GRAVITY SEWER	1,901	L. F.	\$39.00	\$74,139.00
212-18C		15" PVC GRAVITY SEWER	2,059	L. F.	\$42.00	\$86,478.00
		MANHOLES	171	EA.	\$2,783.00	\$475,893.00
179-12C	WINDERMERE PHASE					
179-12		8" PVC GRAVITY SEWER	8,457	L.F.	\$30.00	\$253,710.00
179-12B		8" DIP GRAVITY	300	L.F.	\$39.00	\$11,700.00
179-12G		MANHOLES	37	EA.	\$2,783.00	\$102,971.00
63-25B	WINDMILL ORCHARD					
		8"PVC GRAVITY SEWER	1,945	L. F.	\$30.00	\$58,350.00
		MANHOLES	8	EA.	\$2,783.00	\$22,264.00



## COLUMBIA SYSTEM VALUATION

As Built No.	PROJECT NAME	DESCRIPTION	QTY.	UNITS	UNIT COST	COST
169-06	WINSLOW SUBDIVISION					
169-06A-F		8" PVC GRAVITY SEWER	33,381	L. F.	\$30.00	\$1,001,430.00
169-06B		8" DIP GRAVITY SEWER	1,095	L.F.	\$39.00	\$42,705.00
169-06E		15" PVC GRAVITY SEWER	1,615	L. F.	\$42.00	\$67,830.00
169-06G		15" DIP GRAVITY SEWER	75	L. F.	\$55.00	\$4,125.00
169-06-J		MANHOLES	182	EA.	\$2,783.00	\$506,506.00
169-06M						
169-06N						
169-06O						
	MISCELLANEOUS NO AS-BUILTS	8" PVC GRAVITY SEWER	56,890	L. F.	\$30.00	\$1,706,700.00
	BLOCKS (1078,1080,0832,0834,0836, 0618,0620,0622,0438,0440)	MANHOLES	272	EA.	\$2,783.00	\$756,976.00
	SERVICE CONNECTIONS	4" SERVICE LATTERAL	11,000	EA.	\$350.00	\$3,850,000.00
		TOTAL				\$44,616,776.00

**B. GRAVITY SEWER LINE AND FORCE MAIN ANALYSIS**

DESCRIPTION	QTY	UNIT	UNIT COST	REPRODUCTION COST	AGE	AVERAGE SERVICE LIFE	DEPRECIATION %	DEPRECIATION AMOUNT	REPRODUCTION COST
									NEW LESS DEPRECIATION AMOUNT
8" PVC GRAVITY SEWER	631.276	L.F.	\$30.00	\$18,938,250.00	12	100	0.12	\$2,272.590	\$16,665,660
8" DIP GRAVITY SEWER	16,938	L.F.	\$39.00	\$660,582.00	12	100	0.12	\$79,270	\$581,312
8"VC GRAVITY SEWER	31,091	L.F.	\$32.00	\$994,912.00	20	100	0.20	\$198,982	\$795,930
10" PVC GRAVITY SEWER	12,548	L.F.	\$32.00	\$401,536.00	12	100	0.12	\$48,184	\$353,352
10" DIP GRAVITY SEWER	1,351	L.F.	\$42.00	\$56,742.00	12	100	0.12	\$6,809	\$49,933
10" VC GRAVITY SEWER	4,923	L.F.	\$34.00	\$167,382.00	20	100	0.20	\$33,476	\$133,906
12" PVC GRAVITY SEWER PIPE	7,017	L.F.	\$35.00	\$245,595.00	12	100	0.12	\$29,471	\$216,124
12"DIP GRAVITY SEWER	10,501	L.F.	\$49.00	\$514,549.00	12	100	0.12	\$61,746	\$452,803
12" VC GRAVITY SEWER	11,523	L.F.	\$37.00	\$426,351.00	20	100	0.20	\$85,270	\$341,081
15" PVC GRAVITY SEWER	15,167	L.F.	\$42.00	\$637,014.00	12	100	0.12	\$76,442	\$560,572
15" DIP GRAVITY SEWER	248	L.F.	\$55.00	\$13,640.00	12	100	0.12	\$1,637	\$12,003
15" VC GRAVITY SEWER	2,219	L.F.	\$45.00	\$99,855.00	20	100	0.20	\$19,971	\$79,884
18" PVC GRAVITY SEWER	8,660	L.F.	\$51.00	\$441,660.00	12	100	0.12	\$52,999	\$388,661
18" DIP GRAVITY SEWER	258	L.F.	\$66.00	\$17,028.00	12	100	0.12	\$2,043	\$14,985
24"VC GRAVITY SEWER	7,546	L.F.	\$70.00	\$628,220.00	25	100	0.25	\$132,055	\$396,165
27" PVC GRAVITY SEWER	65,831	L.F.	\$79.00	\$5,200,649.00	12	100	0.12	\$624,078	\$4,576,571
2 1/2" FORCE MAIN	1,122	L.F.	\$5.00	\$5,610.00	12	100	0.12	\$673	\$4,937
4" FORCE MAIN	555	L.F.	\$8.00	\$4,440.00	12	100	0.12	\$533	\$3,907
6" FORCE MAIN	7,689	L.F.	\$10.00	\$76,890.00	12	100	0.12	\$9,227	\$67,663
12"DIP FORCE MAIN	8,766	L.F.	\$36.00	\$315,576.00	12	100	0.12	\$37,869	\$277,707
12" PVC FORCE MAIN	2,639	L.F.	\$22.00	\$58,058.00	12	100	0.12	\$6,967	\$51,091
MANHOLES	3,939	EA.	\$2,783.00	\$10,962,237.00	12	100	0.12	\$1,315,468	\$9,646,769
SERVICE CONNECTIONS	11,000	EA.	\$350.00	\$3,850,000.00	15	100	0.15	\$577,500	\$3,272,500
TOTAL WASTEWATER COLLECTION AND FORCE MAIN				\$44,616,776.00					\$38,943,514

**C. LIFT STATION REPRODUCTION COST AND ANALYSIS**

[illegible]

## D. STUDY AREA MAP